Commonwealth of Kentucky
Division for Air Quality

PERMIT STATEMENT OF BASIS

SOURCE NAME:	Westvaco Corporation, Chemical Division
SOURCE ADDRESS:	2025 Beech Grove Road, Wickliffe, KY 42087
COUNTY:	Ballard
AFS Number:	21-007-00012
SIC CODE:	2819
LOG NUMBER:	G311
RECEIPT DATE:	September 24, 1999
TYPE OF PERMIT:	Title V issued on March 10, 1999
PERMIT NUMBER:	V-99-009
PERMIT REVISION:	Revision 1
PERMIT REVIEWER:	Kumar Pole
DATE:	November 9, 1999

SOURCE DESCRIPTION:
Westvaco Corporation, Chemical Division (hereafter referred to as 'Westvaco') operates an activated carbon manufacturing plant in Wickliffe, Kentucky. The facility produces activated carbon products used in onboard vapor recovery systems and as speciality carbon catalyst.

PERMIT REVISIONS:

a. Description of proposed modification:
Westvaco Corporation has applied for a construction permit for a modification at their activated carbon plant. This modification will consist of a new Speciality Thermal Carbon (STC) process. This process will be an extension of the existing Screening/Grinding/Packaging operation at the plant (Emission Point 03 in the permit). As such, the introduction of the STC process will not increase the throughput through the plant since the STC process will merely produce a different sized carbon using the activated carbon coming from the existing activation kiln.

b. Permit Revisions:
The STC process has been added to Westvaco's Title V permit (V-99-009) as a '**minor permit revision**'. This change can be considered a minor permit revision for the following reasons:
1. The change in emissions is not significant under PSD - the increase in emissions of PM/PM10 emissions will be 12.79 tpy.
2. There will be no relaxation of any existing emission limitations, or monitoring, recordkeeping or reporting requirements. Certain changes have been made to previous monitoring requirements but these have been replaced with equivalent methods of compliance demonstration. These changes have been detailed later on below.
3. The only regulations that apply to this modification are generally applicable regulations - 59:010 and 63:010.

4. The monitoring, recordkeeping, and reporting requirements specified for the Speciality Thermal Carbon process are consistent in terms of stringency with requirements already specified in the permit for similar particulate sources.

Since this is not considered a major permit revision, the permit issuance date has NOT been reset. Changes have been made in Section B (for emission point Emission Point 03 only), Section G (added testing requirements), and Section I (added compliance schedule) and the dates of issuance for these Sections have been reset in the Table of Contents. Additionally, a permit revision date has been added to the cover sheet of the permit.

Apart from adding the Speciality Thermal Carbon process to the permit, the following revisions have been made to the Title V permit:

1. The monitoring requirements for the Drying Kiln (Emission Point 03) and Screening/Grinding/Packaging Operations (Emission Point 03) control devices have been changed. The permittee is no longer required to monitor the pressure drop across the fabric filters to demonstrate that the fabric filters on these sources are working properly and controlling emissions of particulate matter. Instead, Westvaco is now required to install "broken-bag" Triboguard (or equivalent) detectors on the drying kiln baghouse and the cartridge filter on the Screening/Grinding/Packaging Operations. The previous requirement to monitor the pressure drop across the fabric filters has been eliminated from the permit.
2. The Compliance Demonstration Method for the particulate matter emissions limits for the Drying Kiln (Emission Point 03), Screening/Grinding/Packaging Operations (Emission Point 03), and the Lime Storage and Feed System (Emission Point 16) have been combined under **Section D, Emission Limitations and Testing Requirements**. These three existing sources along with the new Speciality Thermal Carbon process vent to the atmosphere through a common Stack B. Given the difficulty in obtaining isokinetic samples because of physical constraints, it is difficult to test each of these emission sources individually, thereby eliminating the possibility of developing individual emission factors for each of these sources. Therefore, a decision has been made to combine the emission limits of each of these 4 sources and have the permittee demonstrate compliance with the combined limit using a combined emission factor. Accordingly, the following language has been added to the permit in **Section D**:

"Stack B is a common vent to atmosphere for the following sources of particulate matter:

Source	Particulate (including PM_{10}) Limit
Drying Kiln (EP 03)	5.25 lb/hr
Grinding/Screening/Packaging Operations (EP 03)	1.50 lb/hr
Speciality Thermal Carbon Process (EP 03)	3.20 lb/hr
Lime Storage and Feed System (EP 16)	0.30 lb/hr

Total PM/PM_{10} Emission Limit on Stack B =	10.25 lb/hr

Compliance with the particulate matter (including PM_{10}) emission limits shall be demonstrated in aggregate. The plant will be considered in compliance with the above limits if the actual particulate matter emissions from Stack B are less than the sum of the particulate matter limits (10.25 lb/hr) of the individual sources. Actual emissions will be calculated as follows:

Actual Emission Rate = [Monthly dry sawdust to activation kiln] x [Emission factor observed during the last state-witnessed stack test (in pounds PM/PM10 per ton of dry sawdust] ÷ [Monthly hours of operation of the drying kiln]"

This Compliance Demonstration Methodology is similar to the previous methodology.

c. Applicable Regulations:
   a. Regulation 401 KAR 59:010, *New Process Operations*, applies to the emissions of particulate matter from the Speciality Carbon Process. Based on a "process weight rate" of 6,600 lbs/hr of carbon (dry weight basis), the maximum allowable emission rate for particulate matter will be 7.53 lbs/hr. However, since the permittee will have to use fabric filters to meet these limits, PTE of the process is effectively limited to a level far below the 7.53 lbs/hr allowed. To better reflect the true PTE of the STC process, an alternate emission limit of 3.2 lbs/hr has been established in the permit. This is not a synthetic minor limit since the permittee must use fabric filters in order to meet the 50:010 allowable.
   b. Regulation 401 KAR 63:010, *Fugitive Emissions*, applies to the emissions of fugitive dust from the Speciality Carbon Process. Measures that Westvaco will implement to minimize fugitive emissions include:
      i. Use of enclosed conveyors to transport carbon.
      ii. Enclosure of the STC process, except for the associated product and fines storage tanks and the truck loading area.

d. Type of control and efficiency:
   The STC process will have six (6) new cartridge filters, each will an efficiency of 99%. Each of the five oversize STC storage tanks will be equipped with a filter while the 6^{th} filter will control particulate emissions from the three fines storage tanks and the truck loading station.

e. Emission factors and their source:
   Emissions estimates from the STC process were provided by Westvaco and were based on local emission factors developed by applying material balance.

AFFECTED STATES:
Tenneesse, Illinois, Missouri

CREDIBLE EVIDENCE:

This permit contains provisions which require that specific test methods, monitoring or recordkeeping be used as a demonstration of compliance with permit limits. On February 24, 1997, the U.S. EPA promulgated revisions to the following federal regulations: 40 CFR Part 51, Sec. 51.212; 40 CFR Part 52, Sec. 52.12; 40 CFR Part 52, Sec. 52.30; 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12, that allow the use of credible evidence to establish compliance with applicable requirements. At the issuance of this permit, Kentucky has not incorporated these provisions in its air quality regulations.